UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/844,537	04/27/2001	Robert W. Baxter	9266-2	3743

20792	7590	12/15/2005

MYERS BIGEL SIBLEY & SAJOVEC
PO BOX 37428
RALEIGH, NC 27627

EXAMINER
CORRIELUS, JEAN M

ART UNIT	PAPER NUMBER
2162	

DATE MAILED: 12/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/844,537	BAXTER ET AL.
	Examiner	Art Unit
	Jean M. Corrielus	2162

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *16 September 2005*.

2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-33* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-5,12-16 and 23-27* is/are rejected.

7) ☒ Claim(s) *6-11, 17-22, 28-33* is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

1.   This office action is in response to the amendment filed on September 16, 2005, in which

claims 1-33 are presented for further examination

Response to Arguments

2.   Applicant's arguments filed on September 16, 2005 have been fully considered but they

are not persuasive. (See Examiner's remark).

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth
> in section 102 of this title, if the differences between the subject matter sought to be patented and the prior
> art are such that the subject matter as a whole would have been obvious at the time the invention was made
> to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be
> negatived by the manner in which the invention was made.

4.   Claims 1-5, 12-16 and 23-27 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Eidson US Patent no. 5,923,557 and Srinivasan et al., (hereinafter "Srinivasan") US Patent

no. 6,823,336.

As to claims 1, 12 and 23, Eidson discloses the claimed limitations "storing a command

for the controller in a database, wherein the command is selected from a group of commands

consisting of a write command that is configured to write a value of a real-time process control

variable to the controller and read command that is configured to read a value of a real time

process control variable from the controller" as a means wherein the information in the database

includes a set of device specific information for each of the process control devices detected by

the mapping processor, where such device specific information for a particular process control

device contains information such as the number of variables associated with the process control

device, the triggering requirement, wherein in general, each variable associated with a process

control device maps to a channel (col.4, lines 55-65). Eidson does not explicitly state that the use

of detecting the stored command in the database. However, the device-specific information

stored in the database 32 as disclosed by Eidson contains a set of device specific information

(commands) that is detected by the mapping processor 30. Such mapper use as a protocol in

helping to detect the commands stored in the database, col.4, lines and 55-58). Eidson discloses

also the use of "sending the detected command to the controller" as a way of passing the

information to the mapping processor which has stored into the database to the controllers (see

items 60, 61 and 62; and col.6, lines 3-32). On the other hand, Srinivasan discloses the use of

detecting the stored command in the database (col.7, lines 3-12). Therefore, it would have been

obvious to one of ordinary skill in the art of data processing, at the time the present invention

was made to modify the teachings of cited references, wherein the process control system,

provided therein (See Edison's fig.3) would be more explicit detail the use of detecting the

commands stored into the database without using the mapping processor as disclosed by Eidson

(col.4, lines 55-58). One having ordinary skill in the art at the time the invention was made

would have found it motivated to utilize such a modification because that would provide

Edison's system the enhanced capability of enabling the application controller to communicate

with the process control to automatically detect the device specific information into the database,

thereby decreasing the difficulty and cost of maintaining the process control system

As to claims 2, Eidson discloses the claimed limitation "verifying that the stored command is a valid command for the controller" as obtaining information such as the triggering requirement (col.5, lines 22-29).

As to claims 3, Eidson discloses the claimed limitations "sending a write command that is configured to write a first value of a first real-time process control variable to the controller" by writing the interface specific configuration information in the device oriented interface database with appropriate values (col.5, lines 15-20); and "sending a read command that is configured to write a first value of a first real-time process control variable to the controller responsive to sending the write command that is configured to write the first value of the first real time process control variable to the controller" as reading the device specific information from the device dictionary and writing it to appropriate entries in the device oriented interface database (col.5, lines 43-47).

As to claims 4, Eidson discloses the claimed limitations "receiving a response from the controller responsive to sending the retrieved command to the controller" (col.6, lines 1-7); and "updating a status of the retrieved command sent to the controller in a command table in the database to indicate whether the retrieved command sent to the controller succeeded or failed" as updating the dictionary server attached to field bus as new process control device become available or modified in term of device specific information (col.5, lines 61-64).

As to claims 5, Eidson discloses the claimed limitation "updating the current value associated with the first real time process control variable in a tag in the table in the database with the first real time process control variable read from the controller responsive to receiving the response from the controller" as updating the dictionary server attached to field bus as new process control device become available or modified in term of device specific information (col.5, lines 61-64).

As to claims 13-16:

Claims 13-16 are for system claims performing the methods of claims 2-5. They are similarly rejected.

As to claims 24-27

Eidson has computer program embedded in the computer can be used to performed Claims 24-27 are for computer readable medium containing instructions performed by the methods of claims 2-5. They are similarly rejected.

Allowable Subject Matter

5.   Claims 6-11, 17-22 and 28-33 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Reason for Indicating Allowable Subject Matter

6.   The present application has been thoroughly reviewed. Upon extensive and exhaustive

searches of various databases (see search notes in case jacket), the examiner respectfully submits

that the claimed feature --providing a tag table in the database that comprises definitions of a

plurality of real time process control variables, wherein each of the plurality of real time process

control variables is associated with a monitoring frequency and a current value; periodically

sending a read command that is configured to read a value of a real-time process control variable

for respective ones of the plurality of real time process control variables from the controller

based on the respective monitoring frequencies; and updating the respective current values for

respective ones of the plurality of real time process control variables with the respective values

of the real time process control variables read from the controller-- in the method, system and

computer program of claims 6, 17 and 28 respectively and in conjunction with all other

limitations of the dependent and independent claims would not found anticipated or obvious over

the prior art made of record.

Remark

(A).   Applicant asserted that Eidson does not detect the stored command in the database and

sending the detected command to the controller. The examiner disagrees with the precedent

assertion. However, when read and analyzed in the light of the specification, the invention as

claimed does not support applicants' assertion. Moreover, the claims do not capture the essence

of the invention as argued in applicants' remark pages 13-15. It is important to note that

applicants are interpreting the claims very narrow without considering the broad teachings of the

reference used in the rejection. In the last office action, the examiner went through the claims

phrase by phrase and referred to the prior art column and line number as to where he has drawn

the correspondences between applicants' claims phrases and prior art. It is respectfully submitted

that Eidson discloses a system to provides a standard interface to process control devices (col.1,

lines 9-11). In particular, Eidson discloses a controller (PLC) connected to one or more process

control device via one of the different types of field buses. Such Controller includes a processor

that executes a set of application code for communicating with and controlling the corresponding

process control devices (col.9, lines 46-55). Such standard interface is provided by a mapper,

which includes a means for obtaining a set of information pertaining to the process control

device where the information describes the process control device (col.9, lines 58-67), similarly

to the description provided by applicant' specification page 6, fig.3. The device oriented

interface database facilitates communication between clients and one or more controller, wherein

the controller is a device used to monitor and control internal and external components with the

central processing unit. More specifically, the mapper provides application controllers with a

standardized interface for setting up peer-to-peer communication among the process control

devices. Applicant should duly note, the mapper processor when building the database allocates

channel from the application controller to the mapper for use in writing configuration

information to the process control devices for use peer-to peer communication, wherein the

application controller transfer the configuration data through the channel and the mapping

processor in turn writes the configuration data to the process control device (col.7, lines 18-28),

and wherein the mapper builds a set of information pertaining to each of the process control

devices and builds a set of configuration information into the interface database, such

configuration information includes device specific information and interface specific (col.4,

lines 27-47). Moreover, the device specific information for the controller is stored in database 32

to allow the controller to be monitored or controlled by sending commands to the controllers

(col.5, lines 55-67). Upon request the mapping processor reads the device specific information

from the device dictionary ant write it to appropriate entries in the interface database, the device

specific information in the database includes a set of device information for each of the process

control devices detected by the mapping processor (col.4, lines 55-62). Eidson discloses the

claimed limitations "storing a command for the controller in a database, wherein the command is

selected from a group of commands consisting of a write command that is configured to write a

value of a real-time process control variable to the controller and read command that is

configured to read a value of a real time process control variable from the controller" as a means

wherein the information in the database includes a set of device specific information for each of

the process control devices detected by the mapping processor, where such device specific

information for a particular process control device contains information such as the number of

variables associated with the process control device, the triggering requirement, wherein in

general, each variable associated with a process control device maps to a channel (col.4, lines 55-

65). Eidson does not explicitly state that the use of detecting the stored command in the database.

However, the device-specific information stored in the database 32 as disclosed by Eidson

contains a set of device specific information (commands) that is detected by the mapping

processor 30. Such mapper use as a protocol in helping to detect the commands stored in the

database, col.4, lines and 55-58). Eidson discloses also the use of "sending the detected

command to the controller" as a way of passing the information to the mapping processor which

has stored into the database to the controllers (see items 60, 61 and 62; and col.6, lines 3-32).

Eidson clearly discloses the invention as claimed. Hence the 35 U.S.C 103 is hereby sustained.

Conclusion

7.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time
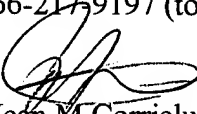
policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing

date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Jean M. Corrielus whose telephone number is (571) 272-4032.

The examiner can normally be reached on 10 hours shift.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, John Breene can be reached on (571) 272-4107. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jean M Corrielus
Primary Examiner
Art Unit 2162

December 9, 2005